IN THE SPECIFICATION

Please amend the specification as follows:

Please replace the paragraph on page 1, lines 15 – 31, which begins with "Optical transport techniques", with the following rewritten paragraph:

- -Optical transport techniques are often utilized to direct a beam or pulse of light from a light source to a test site and, subsequently, to carry analytical information generated or measured at the test site to a suitable light receiving device. Analytical information transmitted by optical means can be chemical or biological in nature. For example, the analytical information can be used to identify a particular analyte, i.e., a component of interest, that is resident within the sample contained at the test site and to determine the concentration of the analyte. Examples of analytical signals include, among others, emission, absorption, scattering, refraction, and diffraction of electromagnetic radiation over differing ranges of spectra. Many of these analytical signals are measured through spectroscopic techniques. Spectroscopy generally involves irradiating a sample with some form of electromagnetic radiation (i.e., light), measuring an ensuing consequence of the irradiation (e.g., absorption, emission, or scattering), and interpreting [[of]] the measured parameters to provide the desired information. An example of an instrumental method of spectroscopy entails the operation of a spectrophotometer, in which a light source in combination with the irradiated sample serves as the analytical signal generator and the analytical signal is generated in the form of an attenuated light beam. The attenuated signal is received by a suitable input transducer such as a photocell. The transduced signal, such as electrical current, is then sent to a readout device.- -

Please replace the paragraph on page 2, lines 5 – 13, which begins with "The concentration of a given analyte", with the following rewritten paragraph:

- -The determination of a property such as concentration of a given analyte in a sample through a spectrochemical method ~~determination~~ typically involves several steps. These steps can include (1) acquiring an initial sample; (2) performing sample preparation and/or treatment to produce the analytical sample; (3) using a sample introduction system to present the analytical sample to the sample holding portion of a selected analytical instrument (e.g., transferring the sample to the sample-holding portion of a UV spectrophotometer); (4) measuring an analytical signal (e.g., an optical signal) derived from the analytical sample; (5) establishing a calibration function through the use of standards and calculations; (6) interpreting the analytical signal based on sample and reference measurements; and (7) feeding the interpreted signal to a readout and/or recording system.- -

Please replace the paragraph on page 7, lines 18 – 32, which begins with the phrase "The present invention provides", with the following rewritten paragraph:

- -The present invention provides a mechanical, rotary optical ~~fiber-optic~~ multiplexer (and/or demultiplexer) apparatus for selecting channels through which a beam or pulse of light is routed in an indexing manner. The apparatus can comprise ~~comprises~~ one, two, or more rotary indexing devices. One of the rotary indexing devices demultiplexes a beam of light by distributing the light from a single, common outgoing or source line into a selected one of a plurality of outgoing or source channels. The selection is accomplished by rotating the demultiplexing device into a position at which the common outgoing or source line can optically communicate with the selected outgoing channel. The other rotary indexing device, when

employed in certain embodiments of the invention, multiplexes a beam of light for transmission into a single incoming or return line by selecting ~~a selected~~ one of a plurality of incoming or return channels. The selection is accomplished by rotating the multiplexing device into a position at which the common incoming or return line can optically communicate with the selected incoming or return channel. In other embodiments, each incoming or return line is optically aligned with a signal receiving means such as a photodetector, thereby eliminating the need for the second rotary indexing device and the common incoming or return line.- -

On page 11, after the paragraph beginning on line 28 with "The fiber-optic channel selecting apparatus", and before the paragraph beginning on line 32 with "According to a method", please add the following new paragraph:

- -According to a method for selecting an optical channel from a plurality of optical channels, an optical channel selecting device is provided. The optical channel selecting device comprises a rotary member including an input side, an output side, and an internal optical path running between the input side and the output side. The rotary member is rotated to a position corresponding to a selected optical channel. At this position, the internal optical path can optically communicate with a corresponding one of a plurality of optical source lines and a corresponding one of a plurality of optical return lines separate from the optical source lines.- -

Please replace the paragraph beginning on page 11, line 32 and ending on page 12, line 10, which begins with the phrase "According to a method", with the following rewritten paragraph:

- -According to another [[a]] method of the present invention, an optical channel is selected from a plurality of optical channels. An optical channel selecting apparatus is provided that comprises an input selection device including a first input end and a first output end, an output selection device including a second input end and a second output end, and a coupling mechanism interconnecting the input selection device and the output selection device. The input selection device provides an input path between the first input end and the first output end, and the output selection device provides an output path between the second input end and the second output end. The optical channel selecting apparatus selects a first channel by causing the coupling mechanism to move the first output end to a first input position and the second input end to a first output position. Other channels can be selected by causing the coupling mechanism to move the first output end and the second input end to other input and output positions corresponding to other available channels.- -

Please replace the paragraph on page 28, lines 6 – 9, which begins with the phrase "It will be noted that", with the following rewritten paragraph:

- -It will be noted that multiplexing apparatus **10'**, in which either source line selector device **80** or return line selector device **130** is eliminated, and either including or not including the other features of analytical system ~~spectrophotometer~~ **600**, can be integrated into the various systems of the invention described with reference to Figures 3 and 8 in the place of multiplexing apparatus **10**.- -